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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/064,911 | 08/28/2002 | Robert W. McConnell | 19441-0005 | 9561 |

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[REDACTED] EXAMINER

WAKS, JOSEPH

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 2834 | |

DATE MAILED: 03/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|----------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/064,911 | MCCONNELL, ROBERT W. | |
| | Examiner | Art Unit | |
| | Joseph Waks | 2834 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 15 October 2002.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-19 is/are pending in the application.

4a) Of the above claim(s) 14-19 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-13 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 15 October 2002 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

| | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-13, drawn to microturbine generation system, classified in class 290, subclass 52.
 - II. Claims 14-19, drawn to a method of current conversion via a high voltage DC link, classified in class 363, subclass 35.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the method of providing transient load support may be used to support uninterrupted power supply to traffic light system or computer system.
2. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
3. During a telephone conversation with Chris Pherson on February 28, 2003 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-13. Affirmation of this election must be made by applicant in replying to this Office action. Claims 14-19 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1-3, and 5-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gilbreth et al. (US 6,487,096)** in view of **Underwood et al. (US 6,072,302)**.

Gilbreth et al. discloses in Figure 4 a turbine engine generator set 76 supplying electric energy to the utility grid 78, a battery source 86 with a voltage boosting circuit 84 producing dc power in a startup and a transient load mode, a power converter 72, main inverter 74, and a battery charging circuit coupled to ac link via inverter 74 to charge the battery source in a charging (re-charging) mode when the turbine generator is not generating the electric power (see Figure 13). However, **Gilbreth et al.** do not disclose the transformer selectively coupled to the main inverter and the utility grid.

Underwood et al. disclose in Figure 4 a turbine engine generator set 15 supplying electric energy to the utility grid 99 via power converter 60 and inverter 70, wherein a transformer 74 is selectively coupled to the main inverter and the utility grid for the purpose of matching the grid voltage.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the system as taught by **Gilbreth et al.** and to provide the transformer selectively coupled to the main inverter and the utility grid as taught by **Underwood et al.** for the purpose of matching the grid voltage.

Re claim 2, **Gilbreth et al.** discloses in Figure 7 the system provided with a single battery 170.

Re claim 3, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the voltage boosting system boosting the voltage from the battery source by a factor range between five to fifteen, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

6. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Gilbreth et al.** (US 6,487,096) in view of **Underwood et al. (US 6,072,302)** as applied to claim 1 above and further in view of **Kern (US 6,081,104)**.

The combined system discloses all elements essentially as claimed. However, it does not disclose the voltage boosting system including the pulse-width modulatable storage unit and the controller for pulse-width modulating the storage unit.

Kern discloses in Figures 5 and 15 power supply system including the pulse-width modulatable storage unit and the controller for pulse-width modulating the storage unit, 132, 134, 136 and the controller 82 pulse-width modulating the storage unit for the purpose of controlling the output voltage when the battery is augmenting the system demand when it exceeds the capacity of the power source.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined system and to provide the pulse-width modulatable storage unit and the controller for pulse-width modulating the storage unit as taught by **Kern** for

the purpose of controlling the output voltage when the battery is augmenting the system demand when it exceeds the capacity of the power source.

Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Waks whose telephone number is (703) 308-1676. The examiner can normally be reached on Monday through Thursday 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.


JOSEPH WAKS
PRIMARY PATENT EXAMINER
TC-2800

JW
March 7, 2003